

vast proportion of this thickness was evidently deposited in the deep sea, where accumulation could only go on with extreme slowness; and remember, too, how long a time would be required to silt up our own Hobson's Bay, close to the shore, and of very inconsiderable depth. Or take another geological phenomenon, that of denudation. How long must it have taken for the most rapid currents, and the most boisterous seas, to have cut down and carried away that vast amount of strata which has evidently been removed all over the Australian continent. Not a few geologists have gone so far as to suggest whether the erosion of gorges and valleys in granitic mountain chains has not been the result of long continued atmospheric action alone. Grant this, and surely the objection raised upon the score of time must be abandoned.

I must again request that you will not look upon the present paper as an attempt to set up a theory. So far as I have had an opportunity of examining the rocks of this colony, they certainly, to my mind, appear to favour the suppositions herein advanced. It may happen, however, that observations made in other lands might have led me to very different conclusions. It is in order that I may supplement my own facts and observations with the facts and observations of other and more experienced geologists that, with the greatest diffidence, I lay this paper before your Society.

ART. VII.—*A Report on the Results of an Exhibition of Gems, both Victorian and Foreign, and Works in the Jewellers' Art, in both Gold and Silver, held in the Hall of the Royal Society of Victoria during the week ending the 6th May, 1865.* Drawn and presented to the Royal Society by the REV. J. J. BLEASDALE, D.D., the President for the current year, 1865.

TO THE COUNCIL AND THE MEMBERS OF THE ROYAL SOCIETY.

Gentlemen,—I have the honour to submit the following Report on the Exhibition of Gems and Jewellery, which originated in a suggestion of mine made some months ago in a short paper read before this Society, and which, under your auspices, has now been brought to a successful termination.

It affords me satisfaction to be able to state that the numerous and various exhibits were brought together into this hall, and returned to their respective owners, without loss or injury of any kind, and that the whole amount of injury done to any kind of property has not gone beyond the breakage of one pane of glass, and a single glass vial not thicker than a goose-quill. I mention this for the information and encouragement of exhibitors, should we ever need to invite their co-operation again in a similar project.

From all that I have been able to gather from the various sources through which public opinion is made known, I have reason to think that those who did the exhibition the honour of a visit went away not disappointed, but rather pleased, whether they were scientific mineralogists or amateurs.

In proposing and in carrying out, under your auspices, this exhibition, I had in view mainly three objects :

1. To bring together from the various gold and gem-producing districts of Victoria, not merely doubtful specimens, but the actual collections of scientific mineralogists and collectors, and the individual discoveries of parties of men employed in mining.

2. To afford a favourable opportunity to persons interested in the development of this neglected source of our mineral wealth, of seeing, in one general view, what Victoria is producing, in what I may call a desultory way, and by accident; and how far these productions will bear comparison with matters of a like nature found in other regions of the world; and also to enable myself to draw up complete catalogues of these various treasures, with a view to the diffusing of more general knowledge of precious stones among the mining population, and thereby inducing them to pay attention to them, and to institute a more uniform and systematic search for them.

3. To make more universally known the power and ability existing among us to elaborate and finish, in all their several departments of art, out of the precious metals with which our favoured country abounds, those works of skill and taste which have been hitherto generally considered the peculiar productions of the old world.

To aid in furthering these objects, fine specimens, both native and foreign, were assembled in this hall, and it is to be hoped not altogether without leaving behind a favourable impression of our own resources.

This Report, then, is intended to further these objects in

some degree; and to furnish a starting point for more extended information; which can alone be collected from local sources. And it is to be hoped that, for some time to come, lucky finders of gem stones will be so good as make their discoveries known, and that the local newspapers will open their columns to their communications, and circulate the information whenever obtained from reliable quarters.

Built as the hall is, with all its lights far over head, it afforded both ample wall space for cases, and at the same time every variety of light and shade that could be desired for the most perfect display of the gorgeous exhibits. Down the centre of the hall were the great cases, holding works of most exquisite finish, and beautiful designs in the precious metals—many the works of our own gold and silver smiths—and some into which *art* was introduced from other countries, for sake of comparison with our own.

Whatever may be the defects of the hall, certainly it is the only one of any considerable size in Victoria entirely suited for an exhibition such as this, or one of painting or sculpture. Its proportions, its wall space, and above all, the height of the windows, secure it this unique distinction.

There was no complaint of the paucity or common place nature of the exhibits; on the contrary; and, had it been deemed desirable, vast quantities more could have been introduced, and among them some magnificent things, *e. g.* large Colonial works in church plate, racing cups, &c.; but they were either declined or not asked for, owing to the difficulty of finding suitable and secure glass cases to protect and display them. This will be, perhaps, the proper place to thank many exhibitors, for their kindness in disturbing their business arrangements in order to supply cases, and especially the Board of Mines, from which, and from the Hon. the Commissioner of Mines and R. Brough Smyth, Esq., I have received the most cordial co-operation.

With the exception of one firm, I never met with a direct refusal to co-operate—but on the contrary, every assistance—whilst some went to both trouble and expense in preparing works specially for the occasion.

Having premised *thus* much, on the general arrangements and matters preliminary to the exhibition, I will now submit to you the substance of the results attained, and such reference to the catalogue of exhibits, which I have appended to this report, as may be useful or necessary for elucidation. As my special object was from the beginning to gather

together on one occasion, within these walls, as large an amount and variety of authenticated Colonial gem stones as possible, whether cut or in their natural state, I intend to devote the main portion of this report to that feature of the exhibition ; still, I trust I shall be able, either to-night or at the next meeting of our society, to do justice to the other half of the precious works in gold and silver which lent so much lustre and interest to the exhibition, both as works of art from the parent country and as displaying the peculiar excellence of our own Colonial workmanship. I will now, for the sake of method, invite your kind attention to a few observations on the gems and precious stones, which I propose to treat in the order in which mineralogists generally place them, commencing, of course, with that justly designated king of minerals the

DIAMOND.

So late as this time twelve months there was a certain amount of hesitation among our mineralogists to admit that the diamond *had been* found in Victoria, beyond the possibility of a doubt. Even my learned predecessor in this chair, Professor M'Coy, when noticing, in his annual address, a paper of mine, in which I had called attention to the subject, added, that "none of them had actually occurred to myself." And this was true. But I had the assurance of more than one truthful man of the fact, and I had examined personally the district which yielded them, and compared it with the geological descriptions of the diamond mines of Brazil and the Ural mountains, and found such evidences of identity as would have warranted me in saying that if none had been found a search for them ought to be instituted. The results of this exhibition have now placed this important truth far beyond impeachment, and have afforded the public an opportunity of seeing our own diamonds both in the rough, and cut and polished, in all their beauty.

The only locality from which I have *seen* the diamond is Beechworth, though I have been assured that one or more have been found near North East Gippsland. Taking the cautious and learned traveller and mineralogist Mawe as an authority, I may here express surprise that no diamond has been reported from Moonambel, Mountain Creek, or Mount Greenock, where the blue topaz occurs. Speaking of the beautiful blue topaz, he says, "It occurs along with chrysoberyl, in that conglomerate which we have already mentioned

as the repository of the diamond." It must be remembered that he mentions—and our own experience confirms it—that the formation in which the blue topaz occurs is quite different from that in which the yellow topaz is found. I am not aware that one yellow topaz has yet been found, while we have discovered blue ones equal to the finest known specimens from other countries. This leads me to point attention to the fact, well known in Brazil, that wherever the blue topaz is found there also the diamond may be looked for. Mr. Turner's collection, in which were some good small blue topazes from Beechworth, confirms the statement of Mawe.—It may not be out of place here to say that I look forward with some anxiety and much hope to the day when the labours of the geological department, so well and so carefully carried out in other districts, shall be extended to those where the diamond has been found. And if I might do so without offence, I would take this opportunity, while the interest raised by the late exhibition is still fresh in the minds of those most interested, to hint that the special examination of these districts about Beechworth should receive the earliest possible attention of the Geological Department; for it is not by individual labour, but only by the careful examinations of a staff from that department, so ably presided over by Mr. Selwyn, that we can expect finality in this direction. Modesty, perhaps, ought to make one abstain from mentioning individuals, and now I only speak of those I personally know, and I throw no imputation on others; but I do here deliberately take this opportunity of saying, that if my learned and amiable friend, Mr. Ulrich, of the Geological Survey, with his extensive experience and his love of crystals, were detailed off, with his assistants, for a few months, all the scientific mists now hanging over our most prolific gem-bearing district might not only be cleared up, but a flood of light thrown on the future prospects of Northern Victoria as a gem-producing country. What I am stating in this place will appear far more reasonable and striking when I come to animadvert upon the special collections of gems forwarded to the exhibition by Mr. Turner and Mr. Milner Stephen—collections made by them upon the very spots where they have been discovered, or picked out of heterogeneous masses of rubbish which miners brought to them for examination.*

* Catalogue—Turner, 6 uncut; Bates, 1 cut, large; Falk, 1 rough, in a ring; Stephen.

CORUNDUM—THE SAPPHIRES.

Of this important class of gem stones it seems to me that no one country in the world can boast of so large a variety. Whatever may be said of the perfection in size and colour of particular stones, it nevertheless does appear that in no known country has there been brought together so great a variety of sapphires; and if this can be said of the results of accidental discovery, surely something more might reasonably be expected had a systematic search been instituted. In reality we owe nearly all our knowledge to the circumstance of these crystals having persistently asserted their greater specific gravity, and having therefore clung to the gold till it came to the last operation of cleansing in the tin dish! What had been thrown away with the larger pebbles no man can tell; but it is the same in all nature, where you find small stones there are larger ones not far off.

Not altogether out of place, in a report like this, will be an anecdote related to me at least nine years ago, and before a single sapphire had been reported by the diggers, by my friend Mr. Crisp, of Queen-street. In the course of a conversation with him on such matters as I am now dealing with, I had asked him for any information he possessed, when he told me of several matters brought to him, and then added, "I have found but one sapphire, and that I got out of the *craw of a wild duck*: curiosity led me to examine the miscellaneous collection of stones in its gizzard, when I found a true dark blue sapphire." I never doubted the truth of this; but the exhibition brought out such an abundance of sapphires from *Dandenong Creek* as to render it rather a wonder that more have not been found under like circumstances, than that he should have discovered the one I now mention.

Of sapphires, then, the exhibition brought together satisfactory specimens of the following kinds and colours:—Indigo blue, pale azure, deeper azure, the *true* azure, the green or Oriental emerald, of which several specimens were very large and fine, and a few well cut by Mr. Spinck, of Melbourne, out of specimens supplied by myself and Mr. M. Stephen, now of Beechworth. There were also many specimens of the hair brown variety, the adamantine spar, quite a number of the *asteriæ*, the star sapphire, but all, save one, of a dark yellowish brown colour, but most perfect in their six-rayed star and their crystallographic characters. In my

collection, as well as that of Mr. Turner and Mr. M. Stephen, was a curious variety of the star sapphire, having a jet black fixed star of six rays, with a black centre, and a fine float of white light over the surface, as cut *en cabochon*. I exhibited several sapphires cut by Mr. Spink, of an opaque or slightly translucent character, which yielded the true character of a cat's eye—but again they differed from the onyx cat's eye, in being of a darkish peculiar colour. I also showed several in the rough. Uncut were a few long crystals of the yellow variety, the Oriental topaz, as also one or two crystals of the grayish-blue variety of the star sapphire. These were in Mr. Stephen's collection.

Of rubies we had only their representative, actually in the exhibition, an opaque, red corundum stone, described and named by Mr. Stephens—Barklyite—after our late governor, Sir Henry Barkly.

There is no doubt, however, that the true Oriental ruby was found by Mr. Ulrich, near Mount Eliza, on Port Phillip Bay. He assured me he had subjected it to every known test of its purity. I may mention that lately I saw a genuine specimen from New Zealand. Last year I exhibited a star-ruby, found in Queensland, and cut in Melbourne, the size of a small horse bean, and very fine both in colour and in the star it displayed.

Any of the above are admirably suited for ring-stones, either for ladies or gentlemen; and would certainly be much more becoming than the bits of blood-stone and carnelian, which are so generally worn by gentlemen now-a-days; while in the case of ladies' bijouterie, the real sapphire would be a vast improvement upon vinegar garnets, and either imitation or bad emeralds set with foil, and sure to be ruined the first time they are immersed in water.

TOPAZES.—COLOURS : WHITE, BLUE, AND PINKISH.

White topazes are very numerous, and of them we had some fine specimens from Beechworth, Gipps Land, and, remarkably, from Flinders' Island, in the Straits. This may be said of those from Flinders' Island, that they possess very great fire and beauty when cut, and are nearly all of a pale yellowish shade in the rough. There were plenty of blue ones from Beechworth, and some in my collection from near Talbot. But I had not any of the exceedingly large ones from the last-named locality, which attracted so much atten-

tion on the occasion of a *conversazione*, held in our Hall a year ago. They had passed into private hands, and could not be easily traced.

No yellow topaz has yet been found that I could ever hear of for certain. All those shown to me were quartz—the *cairnngorm* stone.

I may add that the exhibition brought out nothing fresh as regards the crystallographic character of the white and blue topaz. It was in every instance obscure to the eye, such as presented by rolled pieces, or rather water-worn specimens; but those from Flinders' Island were more distinctly marked in their outline than their Victorian neighbours.

I may venture to say that there is not in the world a stone fit for brooches, of size, and fire, and lustre, and suited to both day and candle light, equal to some of the blue topazes which I have known to be found in Victoria. On former occasions I have brought under the notice of this society blue topazes, both cut and mounted, and in the rough state, of a quarter of a pound weight, perfect in colour, and, considering their great size, almost faultless. Most of these were from about Mount Greenock and Talbot.

ZIRCONS AND HYACINTHS.

The zircon family is most abundant over the gold regions of Victoria. I have seen them of several distinct colours and shades of colour.

In my own collection are a few remarkably beautiful crystals, and rolled lumps of a very dark red colour, and perfectly clear. I exhibited one or two small white ones, cut, but regret to say that I failed to discover the owner of one of great beauty, which I saw when cut by Mr. Spink, and said to have come from Gipps Land. It was free from the sombre tint, so often seen in the white zircon.

Of hyacinths there were in the exhibition a considerable number, both cut and in the rough, found in Ballaarat, near Daylesford, and the Crooked River. Along with the cut specimens I exhibited some fine ones from India, Indian cut, along side of which our own lost nothing in comparison. This gem is perhaps too much underrated, on account of its somewhat brick-red colour; but it must be remembered that it is a fine stone for artificial light, and free from the blackness which so detracts from the beauty of the garnet in any

but daylight. Since these gems are very abundant on nearly all the gold-fields, I cannot help thinking that if they were prized as they ought to be by the public, the lapidary would get over his dislike to them, and devise means for imparting to them their full measure of polish.

BERYLS.

It is uncertain whether any aquamarines have as yet been found in Victoria. I have a few in my collection, but I am wholly ignorant of the country from which they have been brought. Not unfrequently the pale blue topaz is mistaken for the aquamarine, but never if the hardness and specific gravity be attended to.

Lately, my reverend friend, W. B. Clarke, the eminent geologist and mineralogist of Sydney, has sent me a list of his discoveries, which I have appended to the catalogue of our exhibits; and in it he informs me that *he* found in some granite a fragment of true emerald. In working granite quarries these most valuable gems may be at any time discovered.

Perhaps the next in order as gems are the OPALS. Of these we have beautiful specimens of the true *noble* opal, found at Beechworth. I saw three specimens in the hands of diggers, more than two years ago, at Beechworth, which were of great size—quite an inch long—much water-worn.

I exhibited perhaps the finest *fire* opal yet found in Victoria, which I obtained from a digger at Beechworth, and got cut and polished by Mr. Spink. This particularly fine stone, one part of which was cut off for a specimen, attracted the curiosity of the curious in these matters, for its size and beauty; and more than one of the learned exhibited ill-disguised feelings of disbelief on the first day's exhibition. But when the fine collection of Victorian gem-stones arrived from my learned friend, G. Milner Stephen, Esq., now of Beechworth, containing a specimen of this gem, of his own finding, my feelings of gratification may be understood. The *fire* opal, when of good size, is everywhere justly esteemed as a fine stone. Among the Geological Department's exhibits was a fine lump of opal, from South Australia, found by our most able director of the geological survey.

Now, this "fire opal" connects our mineralogy with that of Mexico and Brodbo in Greenland.

Our garnets are, without exception, of the most precious almandine tint, and fine in size and clearness. The exhibition contained quite a number, both cut and in the rough. I have not yet seen one red garnet, such as are found about Mount Vesuvius.

THE QUARTZ ORDER.

The exhibition brought together a vast variety of specimens of this class, both wrought and in the rough, and embracing nearly, if not quite, every known colour. Smoky quartz and cairngorms, as they are called, were in great abundance, as also pure white crystals, and water-worn lumps, and amethysts of every shade of purple, but falling somewhat short in colour, when compared with the best of those of Ceylon and Siberia. These stones occur all over the colony, but have been mostly found where digging for gold is carried on. Among the exhibits of Mr. Turner, of Beechworth, were a number of exceeding beauty and size, exquisitely cut, and tastefully set as brooches and ladies' ornaments.

Chalcedony, chrysoprase, and agates, in great variety, came up from Beechworth, chiefly from the Woolshed Creek and Sebastopol.

TOURMALINES.

The specimens of this stone, found in the granite from the Ovens district, were mostly opaque. The only *clear* crystal that I remember in the exhibition, that was undoubtedly Victorian, was one in my collection, found by myself in granite rubbish close to a bridge, between Benalla and Wangaratta. I thought I had found a specimen in the granite used for the foundation of Sandhurst Gaol, but am not quite sure of it. I call attention to this matter here, for the purpose of interesting some one in keeping an eye to such matters when working the quarries from which that stone was obtained, near Sandhurst. The large concretions of many different substances here and there visible in it was suggestive of other matters besides tourmaline, such as beryl, the emerald, garnets, &c.

In my collection was a dark-green tourmaline, step-cut, of rather more than three carats, which would compare favourably with many emeralds of the same size. This stone

improves in artificial light. The yellow light suits the somewhat bluish-green, and raises it to almost perfect grass green. If this stone proves to be abundant in Victoria, it will soon be a favourite, and bring a good price.

PEARLS.

The exhibition brought together a few samples. Mr. C. D'Oyley H. Aplin, of the geological survey, showed a few from Port Essington; but their 'orient' was not good. Three or four, found in the river Yarra Yarra, were decidedly better, both in form, lustre, and colour.

Whether the true pearl oyster has been found about our shores or bays, I am unable to state. I was informed that these stones were found in a variety of the mussel.

No gem was so sparingly represented in the exhibition, whether by native or foreign specimens, as the pearls. Mr. M'Farlane, of Elizabeth-street, and the Messrs. Davis Brothers, were almost the only ones who sent any Oriental pearls.

PRECIOUS STONES.

We may here very properly draw a broad distinction between gems and *precious* stones. Every gem is a precious stone, but not *vice versâ*.

For the purpose of clearness in this report, they have been separated, mainly, though not solely, by their opacity.

Of this latter kind the exhibition showed a brilliant collection of beautifully cut specimens of malachites, agates from Cooper's Creek and the Ovens, ribbon jasper, and blood stones. These were so exposed as to be readily compared with wrought specimens from Scotland, Egypt, Ceylon, India, Germany, &c. They were mostly cut for brooch stones.

I must now refer to the detailed account of the gem-stones furnished by Geo. Milner Stephen, Esq., as found in the catalogue hereto appended. I feel sure that he will forgive me for saying, that I consider him the most diligent collector, the most enthusiastic labourer in this department that I know, scarcely excepting even my friend, Mr. Ulrich. These matters appear to have been the leading passion of his life—the indication of his peculiar genius. And his fine collections—by far the finest of any private individual in this part

of the world—are evidence of his intelligence and persevering assiduity during half a life time.

I have heard that his collection has been offered to the Government at some price vastly beneath its real value—for it is almost impossible to fix a price on a collection which has been prosecuted under favourable circumstances during very many years. And I take this opportunity of using any weight which can be conceived to attach to my opinion, to say that if the mining department possessed such a collection, it would be of infinite value in the development of our gem treasures—to have them for the purpose of sending specimens, or duplicates, to the athenæums and mechanics' institutes, or other similar public bodies, to serve as standards of comparison with specimens found on the spot. To the man of science such a collection may be of comparatively little use, for he can take his own ways of determining any given gem or mineral; but the miner, the 'digger'—the instrument which the colony has now to use for the collection of these valuable matters—is not a man of science; but for the present, a man who can use his senses, and who, when he has *seen* a thing, can suppose that another which falls under his observation is identical, or similar in appearance; pick it up and reserve it for further inquiry. Good though it may be in its own way, it is not enough to tell a miner, that if he has found something that he knows nothing of, he can have it examined by sending it to Melbourne. The 'digger' is not generally a man who will take that trouble; but if he can get at a specimen near at hand, he will compare his own discovery with it in a leisure hour at night, and then, if he has a doubt remaining, send it for an ultimate examination and report.

It has probably already occurred to you that I have more than once mentioned in this report gems that were known to be Colonial, which I had procured and brought before the society on former occasions, but which were not in our exhibition. I allude to them for the purpose of making this report, and the catalogues appended, somewhat interesting to persons outside our society, into whose hands this paper may happen to fall. And I must now claim your patience for a few moments, while I read to you some matters, which I may call "*results*" of the exhibition, because they confirm some portions of our Victorian discoveries, and because they add materially to our lists of colonial gem-stones. And when I state that it is to the kindness of the Rev. W. B. Clarke,

of Sydney, that I owe the communication, and that he himself has verified every item in his statement, I trust I shall not be considered as travelling out of my legitimate limits in allowing him to speak for himself of the products of New South Wales. He writes: "Now, as to the gems in New South Wales, they are no doubt numerous, but are chiefly confined to the gold-fields. In my book on the southern gold-fields I have appended two notes, in which you will see mention of some that I had met with at the time of publication. I sent you a copy of the book a few days since. Lately we have had found more diamonds about the same locality, Suttor's Bar on the Macquarie River. None of them are of considerable size. Sapphires red and blue, both dark and light coloured (I have also seen the *star* ruby), and topaz are very common, and some of the latter are of large size, but water-worn. Almandine garnet is not uncommon. The common garnet is abundant."

"Chrysolite is very common. Chrysoberyl has also been found; and near Cooma, in granite, I once found a fragment of an emerald. *All* the varieties of quartz have been found, including amethyst.

"In the Uralea River, New England, the amount of sapphire and ruby is enormous. The diggings there are in granite detritus, over granite and under basalt.

"We have *tin* crystals and water-worn corundum in abundance. I have seen a *blue tourmaline*, also epidote proper; and the magnesian variety also occur here. Among other things in this way I have procured very beautiful 12 dodecahedral crystals of gold. Zircon, hyacinth, &c., have also been found by me."

This list informs us that some very fine stones have been found, at least in their substance, whatever may be their individual value as gems, in New South Wales, and in the southern gold-fields. Chrysolite, chrysoberyl, and the star ruby are all valuable, and the last-named one is probably beyond all price, as compared with gold, if it be found of considerable size and strength of colour. All the recognised beauty of the ruby is enhanced by the grand chatoyant play of light, and the peculiar beauty of the six-rayed star.

We have here to deal with a class of men who are, for the present, in Egyptian darkness on all these matters; and we must bear in mind that the readiest way to enlighten men is to place under their eyes standards of comparison, and those well authenticated. The late exhibition showed clearly

enough how ready that class was to avail themselves of any means of obtaining information. Nothing pleased me so much, while it was going on, as to see the hardy miners, notebook in hand, taking an account of what they saw.

Among the many complimentary notices which appeared at the time, hardly one struck me as so effective, and true to what I witnessed, as that in our facetious weekly, *Punch*, in which two 'disgusted diggers' are pourtrayed, one saying to his mate, "*Well, Tom, if those are diamonds, strikes me we've thrown away a fortin in our time.*" Had the intelligent men I allude to seen diamonds—say only one or two—in the place where they were working I think they would have kept a brighter look-out for what fell under their observation. And what is said of the diamond holds good of other precious stones.

A glance at the catalogue of Mr. Turner's exhibits will satisfy any man as to the care and intelligence he has brought to bear on Colonial gems. When I was in Beechworth, two years ago, he most kindly gave me all the information which he possessed at the time, and went with me carefully over his collection. It was among some small stones of his that I found the first specimen of a curious kind of sapphire—a long hexagonal opaque crystal, with a chatoyant lustre across the long axis. This he kindly gave me; and on my return to Melbourne I got Mr. Spink to polish the ends, and I then found that I was right in my conjecture that it was one of the star sapphires. As it was a long crystal, and as its peculiar structure was shown only at the ends of the long axis, and through the long axis, I had it cut in two, and returned one of the pieces to him. This piece, mounted as an elegant ring, was in the exhibition, and the other half was in my collection. It has a distinct black six-rayed star, in a dark blue ground, and the centre, where the rays meet, is black. Over this is the customary opalescent float of white light. The intelligent reader of this report will do well to peruse the catalogue of Mr. Turner's gems. I would, however, call attention to one substance, as I have seen nothing like it before. Mr. Turner described it as a *wax opal*. It was a fine large lump, beautifully transparent, and of a deep wine-yellow colour. I think this ought to be examined more carefully, and the half of it cut and polished, that we may obtain some information of its value as a gem. I have seen nothing that resembles it in shape and apparent weight except some pieces of obsidian; but all the obsidian

I have seen here has been either blackish or greenish, whereas this is a fine clear deep yellow.

I avail myself of this opportunity to thank Mr. Falk, jeweller, of Beechworth, for the information he afforded me when there, and for his unsolicited kindness in sending us a few most valuable exhibits of Colonial gems. The rough crystal of diamond in my collection, mounted as a ring stone, was his. While conversing with him, and examining some specimens of noble opal the property of a digger—and which I much regret I could not obtain for the exhibition—a digger gave me the exceedingly fine fire opal which I exhibited as a ring stone, together with the piece cut off and kept as a specimen.

Mr. Spink's contribution of specimens and samples of his own cutting was very interesting, in both points of view. It was extensive, especially in agates, jaspers, malachite, and topaz. It was the largest and finest known specimen of colonial green sapphire, but it was in uncut.

While speaking of Mr. Spink's exhibits, I may with propriety say a few words specially concerning gems. Mineralogists love crystals; and hardly on any account can they be induced to cut and polish them. Now may I be allowed to say that I too love crystals; but my object is not the mere crystal, but the cut and polished crystal; to ascertain what it is worth as a wrought gem; what it may ultimately bring as a price in the market. My object, then, is first scientific, certainly; but secondly, interesting in a pecuniary point of view. The miner, whom we have to look to as our collector, cares little about the replacement of the angles of the gem stone, but a good deal about what it will fetch when sold in a fair market. Moreover, it must be remembered that there is not the shadow of a chance of mining being carried on for the sole or chief purpose of discovering gem stones; they must continue to be accidental discoveries, or holiday amusements; but still, a deal may be done in these ways, and by children, when we can once make them understand what certain rough-looking things can be converted into by the beautiful art of which Mr. Spink is a master.

Before concluding this report, I must claim your patience while I invite attention to a few considerations which naturally arise out of what I have already brought under your notice concerning the gem treasures of this our adopted country. The long list of gems and precious stones already discovered and brought together in this hall suggests some

interesting reflections, which carry the mind beyond the limits of Australia, and unite us with the most remote quarters of the globe. We have here, then, the peculiarities of India and South America displayed in our diamond mines. The blue sapphires take us to Ceylon and the East Indies. The green sapphire is a distinctive mark of Siam, and yet we have shown Victorian specimens equal to any known. The star sapphires have, perhaps, never been found in any other country save Ceylon, while some of its varieties found here seem altogether new. The ruby is almost peculiar to Ceylon and Pegu, and now to Victoria, Queensland, and some parts of New Zealand. The topazes of Victoria—blue, white, and pink—connect us in mineralogy with Brazil, Ceylon, India, North America. Whether the pink topaz be a genuine formation, or only a brown one altered by heat, this is not the place for discussing; but certain it is, that pink topazes have been found in our mines and cut by our lapidaries, while neither a brown nor a yellow topaz has yet been discovered. *Adhuc sub judice lis est.*

Perhaps no country in the world has excelled Victoria in the size, perfection, and beauty, of the blue and white topaz. And when they are comparatively so abundant and so cheap in their cut state, and so beautiful as ornaments, am I wrong in speaking in the most unmeasured language of contempt of the trumpery materials mounted in colonial gold in questionable taste, and imposed on the ignorant public for the genuine products of our mines, and the result of the skill of our lapidaries?

Catalogue of Gems, in their natural state, found and collected by
 GEORGE MILNER STEPHEN, Esq., *Fellow of the Geological Societies of London, Germany, and Cornwall, Natural History Society of Dresden, &c., &c.*

- 1 (2) Diamonds (the larger exceeding 1 carat), found with 11 others in Finn's Claim. District, *Ovens.*
- 2 (2) Barkly-ite rubies (red corundum). *Ovens.*
- 3 (2) White sapphires (in hexagonal crystals, one having blue terminal planes). *Ovens.*
- 4 (1) Yellow sapphire (in purple hexagonal crystal, a rare specimen). *Ovens.*
- 5 (4) Dark blue sapphires. *Ovens.*
- 6 A green star sapphire (rare). *Ovens.*
- 7 A blue and white sapphire (in hexagonal crystal). *Ovens.*

- 8 (2) Large blue sapphires (one being green across the axis).
Ovens.
- 9 A star sapphire. *Ovens.*
- 10 A fine dark blue sapphire (in hexagonal crystal). *Ballarat.*
- 11 A green sapphire (showing pearly reflections). *Ovens.*
- 12 A Barkly-ite ruby (red corundum). *Ovens.*
- 13 Fine green sapphire, weight $17\frac{7}{8}$ carats, being a fragment of large sapphire measuring $1\frac{3}{4}$ inches across the prism, now in Mr. Milner Stephen's cabinet. *Jim Crow Creek.*
- 14 (2) Small blue sapphires. *Fryer's Creek.*
- 15 (4) Pale blue topazes. *Ovens.*
- 16 (3) White topazes (water-worn). *Ovens.*
- 17 A very large blue topaz, weighing 1 oz. 10 dwts. (water-worn).
Dunolly.
- 18 A blue topaz (showing the "striae" along the prism). *Upper Yarra.*
- 19 Large white topaz (water worn). *Ovens.*
- 20 (9) Essonites (orange-yellow garnets). *Ovens.*
- 21 (24) Almandine garnets (fine colour). *Ovens.*
- 22 (4) Do. do. (in icosi-tetrahedral crystals). *Ovens.*
- 23 (4) Blood-red garnets (pyropes). *Ovens.*
- 24 (6) Large precious garnets. *Ovens.*
- 25 (7) Almandine garnets (fine colour). *Ballarat.*
- 26 (15) Common garnets (in dodecahedral crystals). *Ovens.*
- 27 (2) Pieces of granite, containing almandine garnets. *Ovens.*
- 28 (9) Blood-red garnets (pyropes). *Ballarat.*
- 29 (2) Brilliant amethysts (in hexagonal crystals). *Ovens.*
- 30 (8) Colophonites (wine-yellow garnets). *Ovens.*
- 31 (3) Black spinelles (automalites). *Ballarat.*
- 32 (8) Do. do. *Ovens.*
- 33 (4) Deep red hyacinths (zircons). *Ovens.*
- 34 (2) Violet spinelles, or almandine rubies (one an octahedral crystal). *Ovens.*
- 35 (11) Deep red hyacinths (zircons.) *Ballarat.*
- 36 (100) Small do do. *Daylesford.*
- 37 A fire opal. *Ovens.*
- 38 (4) Black tourmalines, in striated prisms. *Ovens.*
- 39 Quartz crystal (with both terminal planes). *Ovens.*
- 40 Quartz crystal (cut). *Mount Alexander.*
- 41 Darling-ite (species of lydian or touchstone). *Ovens.*
- 42 A star ruby, showing lines of structure in hexagons. *Ceylon.*
(Supposed to be a unique specimen.)

MEMO.—I have mislaid a black centred star sapphire, and a beautiful compound crystal of red spinelle or balas ruby (which I found amongst some tin ore). *Ovens.*—G.M.S.

Exhibited by Mr. Turner, of Beechworth.

- 1 (2) Petrification agates, gold mounted as brooches. *Woolsheds.*
- 2 (5) Cairn gorm stones, gold mounted as brooches. Different colours ; smoky and yellow ; good quality. *Woolshed, Beechworth.*
- 3 Sapphire, mounted as a ring. *Ovens.*
- 4 Star sapphire, mounted as a ring. *Eldorado, Ovens.*
- 5 White topaz, mounted as a ring. *Woolshed, Ovens.*
- 6 Diamond, uncut, mounted as a ring. *Woolshed.*
- 7 (5) Diamonds. 2 octohedrons, 2 convex octohedrons, and 1 elongated convex octohedron. *Woolshed and Eldorado.*
- 8 (3) Smoky quartz. *Woolshed.*
- 9 (2) Yellow quartz. *Woolshed.*
- 10 (3) Geodes (water stones). *Spring Creek, Beechworth.*
- 11 (2) Barkly-ite. *Woolshed.*
- 12 (8) Petrification agates. *Reid's Creek.*
- 13 Agates, striped.
- 14 (5) Lydia stones. *Woolshed.*
- 15 Wax opal. *Near Beechworth.*
- 16 (2) Barkly-ite. *Near Woolshed.*
- 17 Banded jasper. *Beechworth.*
- 18 Plumbago and granite. *Woolshed, Beechworth.*
- 19 (2) Tourmalines ; 1 large crystal, 1 fibrous.

Exhibited by Mr. Sullivan, Bourke-street.

- 1 Amethystine crystals on agate.
- 2 Quartz crystals on rose chalcedony.
- 3 Quartzose crystals, embedded in a mass of crystallized quartz.
- 4 Nodule of crystallized quartz.
- 5 Pebbles of jasper, of various tints.
- 6 Smoky quartz, crystals embedded in granite ; a fine large specimen.
- 7 Wax opal. *Near Beechworth.*
- 8 (60) Blue and white topazes *Near Beechworth.*
- 9 Amethysts, 2 ; Barkly-ite, 4 ; tourmalines, chalcedony, jacinths. (Small specimens in a box.)

Exhibited by Mr. Mills, Richmond.

- 1 (6) Malachite. *South Australia.*
- 2 (3) Do. *Russia.*
- 3 Carnelian, fine red beads ; 12 large, 6 small.
Do. variegated, red and pink ; 15 beads.
Do. yellow, 9 beads.
Do. white, 18 beads

- 4 Red cut beads ; carnelian, 7 ; yellow and pink beads, 31.
- 5 (40) Coral, Sea of Tripoli ; pink coral, cut for buttons.
- 6 (2) Branch coral. Brooch piece, 1 ; fine pink beads, 2.
- 7 Blood stone (Buchana-Persia), very fine specimens. Cut and polished, 5 ; rough do., 1.
- 8 Mass of agate. *Egypt*.
- 9 (5) Onyx. *North India*.
- 10 Agate, sards (very fine). Beads, 15 ; sealstones, 6 ; rough, 1.
- 11 (21) Jasper, green and red. *Egypt*.
- 12 (2) Adulazia or moon stone. 1 large and fine.
- 13 Oriental amethyst, engraved. *Siberia*.
- 14 (24) Small Oriental rubies. *Pegu*.
- 15 (7) Small Oriental onyx. *North India*.
- 16 Chalcedonyx. *North Persia*.
- 17 Aventurine, composition.
- 18 (3) Chrysophase. *Silesia*.
- 19 Seed pearls. *Persian Gulf*.
- 20 Muppul, seed pearl, Scotch oyster.
- 21 (3) Amber.
- 22 (3) Pink shell, carved ornaments.
- 23 (2) Pearl shell, engraved, fine.
- 24 (5) Crystals, fine, cut.
- 25 Lydia stone, fine. *Turkey*.

Exhibited by Mr. Charles McFarlane, Elizabeth-street, Melbourne.

(In a large case.)

- 1 Onyx. *Bohemia*.
- 2 (9) Amethysts (purple). *Saxony*.
- 3 (12) Do. small, uncut.
- 4 Amethyst, very large, do.
- 5 (10) Aqua marines, cut.
- 6 (4) Do. white cut crystals.
- 7 (10) Yellow crystals, cut for rings, seals, &c.
- 8 (4) Rich brown crystals, cut.
- 9 Pink topaz, Brazilian, cut specimen.
- 10 Carbuncle garnets, 1 large and five small specimens.
- 11 (3) Riband jasper (1 cut, 2 rough).
- 12 (4) Moss agates ; (3) carnelians.
- 13 Agates, brooch stones. Various specimens, 7 ; slit specimens, 2. (In small case.)
- 14 (48) Amethysts, red and yellow.
- 15 White crystal, 1 uncut, 4 cut specimens.
- 16 Lapis l'Azuli. *Persia*.
- 17 (13) Roman Mosaics.
- 18 Malachite. *South Australia*.

- 19 Tourquoises. *Bokhara*.
- 20 Asbestos, 1 ; cameo shell, 1 ; enamel painting, Virgin and Child, 1 specimen.
- 21 (3) Pearls. *River Yarra Yarra*.
- 22 (3) Blood stones. *Siberia*.
- 23 (12) Garnets, cut and carbuncle.
- 24 (7) Aqua marines.
- 25 (13) Striped onyx, ring stones. *Germany*.
- 26 (39) Carnelian, red and white, seal and ring stones.
- 27 (18) Blood stones, cut for rings and seals.
- 28 Pearl brooch, Persian seed (plain).
- 29 Jacinth. *Ceylon*.
- 30 (2) Crysolites.

Exhibited by Mr. Spink, Collins-street.

- 1 (15) Malachite. Brooch stone ; a leaf do. ; set of buttons, 6 ; set of sleeve studs, 9. *Burra Burra*.
- 2 (3) Fine yellow amethysts, brooch stones.
- 3 Crystal quartz. Yellow brooch stones, 5 ; smoky do., 2. *Ovens*.
- 4 (3) Crystal quartz. Brooch stone, seal do., and triangle ; finely cut. *Brazil*.
- 5 Amethysts. *Ovens*.
- 6 (2) Zircons, cut. *Ovens*.
- 7 (2) Smoky quartz, cut. *Scotland*.
- 8 (2) White crystals, brooch stones, cut.
- 9 White topaz. 1 uncut, 2 cut. *Flinders Island*.
- 10 (4) Agate, sleeve buttons. *Cooper's Creek*.
- 11 Agate. *Ovens*.
- 12 (3) Agates. *Scotland*.
- 13 Jasper. *Egypt*.
- 14 Jasper. *Surinam*.
- 15 Jasper. *India*.
- 16 (2) Jaspers. *Scotland*.
- 17 (2) Agates. *Germany*.
- 18 Agate. *India*.
- 19 (2) Agates. *Queensland*.
- 20 (3) Smoky quartz. *Ovens*.
- 21 (3) Quartz bearing gold, *Tarrengower*.
- 22 (2) Crystals, part polished. *Ovens*.
- 23 (2) Brazilian topazes, fine specimens.
- 24 Lapis Lazuli, fine slab. *Persia*.
- 25 Granite, forming an obelisk. *Gabo Island*.
- 26 Jade. *New Zealand*.
- 27 (2) Smoky quartz crystals.

- 28 (2) Slit pieces crystal.
 29 (2) Crystal, partly cut.
 30 (2) Hyacinths.
 31 Green sapphire, fine large specimen. *Gipps Land.*

Exhibited by Mr. Vasey Symons.

- 1 Precious garnet. *Bohemia.*
 2 Precious beryl. *Siberia.*
 3 Ore of uranium. *Europe.*
 4 Columbite, Kangaraslusk. *Greenland.*
 5 Vanadate of lead, very rare. *Chili.*
 6 Diophtæs (silicate of copper). *Kirgis Steppe.*
 7 Smoky quartz. *Mourne Mountains (Ireland).*
 8 Crystalline quartz. *Cornwall.*
 9 Amethysts. *Glen Rose (Ireland.)*
 10 Amethysts. *Bay of Fundy.*
 11 Emerald in matrix. *Santa fe de Bogota.*
 12 Emeralds. *Santa fe de Bogota (Peru).*
 13 Rock crystal. *Brazil.*
 14 Quartz stalactite. *Derbyshire.*
 15 Rose quartz. *Bohemia.*
 16 Chalcedony. *Transylvania.*
 17 Ribband galena. *Derbyshire.*
 18 Yellow topaz. *Brazil.*
 19 Topaz (various kinds). *Europe.*
 20 Sulphide of silver. *Transylvania.*
 21 Topaz. *Schechenstein.*
 22 Green quartz. *Dauphiné.*
 23 Cupreous, silicate of zinc. *Caldbeck Fell.*
 24 Beryl topaz. *Mourne Mountains (Ireland).*
 25 Precious opal. *Hungary.*
 26 Amethysts. *Glen Rose (Ireland).*
 27 Topaz. *Brazil.*
 28 Pebbles. Red striped, black and white agates. *Channel Coast of England.*

Exhibited by C. D'Oyley H. Aplin, Esq

- 1 Diamond, natural state. *Brazil.*
 2 Star sapphire. *Ceylon.*
 3 Blue sapphire. *Beechworth.*
 4 Zircon. *Daylesford.*
 5 Quartz crystals. *Cornwall.*
 6 Spinell ruby. *Ceylon.*

- 7 Green sapphire. *Blue Mountain Diggings, Daylesford.*
 - 8 Topaz. *Brazil.*
 - 9 Precious opal. *Mexico.*
 - 10 Pearls. *Port Essington.*
 - 11 Cinnamon stone. *Ceylon.*
 - 12 Corundum, red. *India.*
 - 13 Moon stone.
 - 14 Amethyst, quartz crystal. *Beechworth.*
 - 15 Beryl, unknown. *W. Russia.*
 - 16 Garnets. *Scotland.*
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Exhibited by Geological Survey Department.

- 1 Gold in crystal of quartz.
 - 2 Red opaque corundum, Barkly-ite. *Beechworth.*
 - 3 Sapphires. *Dandenong Creek.*
 - 4 Opal. *South Australia.*
 - 5 Nodules of chalcedony. *Victoria.*
 - 6 Chloro-bromide silver. *St. Arnaud.*
 - 7 Beryl in granite. *S. Australia.*
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*Exhibited by Mr. Cederberg, Gold Embosser and Engraver,
Queen-street, Melbourne.*

- 1 A pair of gold embossed sleeve studs, representing aboriginal natives, kangaroo and emu, in raised gold.
 - 2 An embossing on gold plate, executed by punching from the back and front, representing a copy of Murillo's picture of "Boys Eating Fruit."
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*Exhibited by Dr. Brownless, Vice-Chancellor of the University of
Melbourne.*

- 1 A steel tobacco box, elaborately engraved in devices all over.
 - 2 A plum pudding stone snuff box, gold mountings.
 - 3 A large silver tray or salver, being a testimonial.
 - 4 A large candelabrum, of silver.
 - 5 A black carnelian, surrounded with rose diamonds, mounted as a ring ; antique pattern.
 - 6 An antique signet ring.
-

Exhibited by the Rev. Dr. Bleasdale.

- 1 A fine large emerald, mounted as a ring. *New Granada.*
- 2 A fine large yellow topaz, mounted as a ring. *Brazil.*
- 3 A fine large pink topaz, mounted as a ring. *Brazil.*
- 4 A fine Oriental amethyst, mounted as a ring. *Siberia.*
- 5 A fine fire opal, mounted as a ring. *Beechworth.*
- 6 A fine sapphire star stone, mounted as a ring.
- 7 (2) Onyx cats eyes. *Ceylon.*
- 8 (3) Star sapphires, asterias. *Ceylon.*
- 9 Emerald. *New Granada.*
- 10 (5) Green sapphires. *Near Daylesford.*
- 11 Fire opal. *Beechworth.*
- 12 (4) Moon stones. *Ceylon.*
- 13 Tourmaline crystal. *Ceylon.*
- 14 Tourmaline, cut. *Ceylon.*
- 15 (3) Aqua marines.
- 16 (2) Zircons. 1 rough, 1 cut.
- 17 (5) Zircons, with crystals.
- 18 (4) Garnets, rough. *Gipps Land.*
- 19 (8) White topaz. Rough pebbles, 3 ; cut specimens, 3 ; slit only, 2. *Victoria.*
- 20 Rough sapphires. *Beechworth and Gipps Land.*
- 21 Crystals, rough specimens.
- 22 Jasper, blood stone. *Victoria.*
- 23 Blue sapphire. *Gipps Land.*
- 24 (3) Hair brown sapphires. *Beechworth.*
- 25 (3) Yellow amethysts, fine cut. *Beechworth.*
- 26 (3) Yellow amethysts, fine cut. *Brazil.*
- 27 Amethyst, purple.
- 28 (6) Garnets, red and brown. *Europe.*
- 29 (3) Yellow topaz. *Saxony.*
- 30 (4) Agates, various.
- 31 Carnelian.
- 32 Amethyst, purple, rough.
- 33 Amethyst, almandine garnets.
- 34 Star sapphires.
- 35 Emerald half-hoop ring.

Exhibited by Mr. Falk, Beechworth.

- 1 Yellow topaz, in brooch, gold mounted. *Beechworth.*
- 2 Diamond, in ring. *Beechworth.*

Exhibited by Mr. Anderson, Preston.

- 1 Crystal quartz, gold mounted. 1 pin and 2 rings.

Exhibited by J. B. Were, Esq., per Mr. Cederberg.

- 1 Crystal quartz, cut and mounted in gold as pin. Quartz from the "Age of Progress Mine," *Wood's Point*.
- 2 Labrador felspar, cut monkey's head, ruby eyes. Gold mounted as breast pin.

Exhibited by Mr. J. B. Humffray.

- 1 Crystalized gold. "Kuboid Quartz Mining Company," *Ballarat*.
- 2 Crystalized gold. *Ballarat*.
- 3 Copper from the "Thomson River Copper Mining Company's Claim," *Gipps Land*.

Stones exhibited by Messrs. Walsh.

- 1 Blue topazes.
- 2 Yellow amethysts. *Saxony*.
- 3 Tourquoises. *Northern Asia*.
- 4 (2) Yellow amethysts, brooch stones. *Brazil*.
- 5 (9) Purple amethysts. Yellow do., 6; white do., 2.
- 6 (5) Lapis Lazuli, ring stones. *Persia*.
- 7 (2) Blood stones, cut. *Buchara*.
- 8 Carnelians. White, red, yellow.
- 9 (6) Garnets, cut. *Bohemia, &c.*
- 10 (3) Cat's eyes. *Ceylon*.

Loose Stones, exhibited by Messrs. Denis Brothers, Bourke-street, Melbourne.

- 1 Sapphire, large. *Ceylon*.
- 2 Sapphires. Fine stone, small. *Ceylon*.
- 3 (6) Emeralds, large and good quality. *New Granada*.
- 4 Ruby, fine specimen. *Pegu*.
- 5 (17) Rose diamonds, various sizes.
- 6 (26) Turquoises. *Kiva and Bokhara*.
- 7 Garnets, almandine. *Pegu, Asia, and Europe*.
- 8 Yellow amethysts, seal stones. 1 triangle and 1 yellow.
- 9 Purple amethyst, brooch stone. *Europe*.
- 10 Yellow amethyst, cut stone.
- 11 (2) White quartz crystals, cut.
- 12 Emeralds. Small cut, medium quality. *New Granada*.
- 13 (6) Shell cameos. Subjects carved, unmounted.

Exhibited by the Royal Society.

- 1 Blood stone, in the rough ; a large specimen. *Northern Asia.*
 - 2 Petrification of wood.
 - 3 Crystals embedded in chalcedony.
 - 4 Agate, yellow.
 - 5 (2) Wax medallions.
 - 6 Specimens of agates, jaspers, &c. *Cape Otway, Australia.*
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Exhibited by Gordon and Gotch.

- 1 Bituminous schist, from which kerosene oil is now manufactured.
Little Hartley, New South Wales.

Note.—It closely resembles the Boghead coal, or Forbane Hill mineral.

Exhibited by Mr. Matthew Watershom.

- 1 Specimens of secretions from blue-stone quarries, Riddell's Creek ; between Riddell's Creek Station and Gisborne.
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Exhibited by Dr. Barker.

- 1 Manufactured by the late Dr. Ludwig Becker, an obelisk, composed of stones and medals of Australian production.
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Exhibited by Mr. J. W. Thompson.

- 1 Gold digger's cup. Manufactured by Mr. Edwards.
 - 2 An emu egg, mounted as a vase on a gold base, ornamented with models of digger's tools and machines, supported on two vines, the cup being embraced by vine leaves and tendrils, with bunches of grapes pendant. The cover capped with gold, surmounted by an emu. All mounted and lined with gold. Gold shield name-plate. Weight, 24 ounces of Beechworth fine gold.
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Exhibited by Mr. Younston.

- 1 Quartz triangular seal, gold mounted.
- 2 Fine specimen of pale yellow quartz. *Gipps Land.*

Exhibited by Messrs. Denis Brothers, of Bourke-street, Melbourne.

- 1 Cameo brooches, gold mounted (Roman cameos). Subjects, heads.
- 2 (2) Gold brooch and earrings (diamonds and emeralds).
- 3 Gold brooch and earrings, with pearls and turquoise.
- 4 Gold brooch and earrings, with turquoises.
- 5 Gold brooch, with drop diamond and emeralds.
- 6 Gold brooch, with lapell of emerald and pearls.
- 7 Gold brooch, flower and leaf, with a diamond.
- 8 Opal and brilliant pin.
- 9 Ruby and brilliant pin (horse shoe).
- 10 Amethyst and diamond pin.
- 11 Gold locket, enamelled (diamond, cypher).
- 12 (5) Brilliant cluster rings.
- 13 (4) Brilliant half-hoops.
- 14 Large emerald and brilliant, cluster rings.
- 15 Smaller emerald and brilliant ring.
- 16 (2) Single stone brilliant rings.
- 17 Brilliant top earrings. 2 pairs.
- 18 Pearl and enamel earrings. 3 pairs.
- 19 Ruby and pearl earrings. 1 pair.
- 20 Emerald and pearl earrings. 1 pair.
- 21 Opal and pearl earrings. 1 pair.
- 22 Amethyst and pearls. 1 pair earrings.
- 23 Gold and emeralds. 1 pair.
- 24 Crystal, with ruby and pearls. 1 pair.
- 25 (3) Emu eggs, silver mounted.
- 26 (2) Flower vases.
- 27 Enamel painted tray.

Exhibited by Mr. Powell, of Stephen-street.

- 1 Fine gold ornament. Composed of a cow with diamond eyes, beneath a tree, with gold birds above. Golden grass and foliage, &c. (14 ounces.)

Exhibited by ———

- 1 Onyx ring. The property of the late Count John Dembinski.

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- 1 Cameo portrait of the late Sir B. Brodie. Modelled by Miss Kelly, of Beechworth.

Exhibited by Mr. George Crisp, Queen-street, Melbourne.

- 1 A very fine large emerald, mounted as a ring.
- 2 A superb brooch, consisting of a butterfly of fine brilliants and enamel, playing over a branch of the vine, with a bunch of large fine pearls arranged as grapes.
- 3 Gold brooch of florentine mosaic. Subject, a dove on a branch, with cherries.
- 4 Gold brooch of florentine mosaic, with red roses and other flowers.
- 5 Gold brooch of florentine mosaic. Subject, white rose and other flowers.
- 6 Gold neck chains. Three different patterns, of excellent workmanship.
- 7 A fine brilliant and ruby half-hoop ring, consisting of 3 brilliants of fine quality, and 2 rubies of fine colour.
- 8 An emerald and two brilliants, of fine quality, in a ring.
- 9 An emerald and brilliant ring, smaller, of the finest quality.
- 10 Two large loose emeralds, fine colour.
- 11 A large cameo head, mounted as a brooch, the cameo very fine.
- 12 A small cameo, as pin.
- 13 A gold and enamel locket, of superior workmanship.
- 14 A gold and enamel handkerchief ring.
- 15 A magnificent suite, consisting of—
 1. Large bracelet, mounted with gold stems and ivy leaves, set with elmondine garnets.
 2. A brooch "en suite."
 3. A pair of earrings "en suite."
 The whole of excellent design and finest quality. Materials, gold and jewels.
- 16 A silver mounted glass jug, oxydised silver. An aboriginal piercing an opossum with a spear, forming the design. Elaborately finished.
- 17 A diamond (perfect octohedron) fine specimen. *Borneo.*

Exhibited by Mr. James Murray, Bourke-street, Melbourne.

- 1 A gold brooch, with cut crystal quartz. *Wood's Point.*
- 2 Large brilliant, the largest found in Victoria, mounted as brooch. *Worragy, near Beechworth.*
- 3 Sapphire and gold brooch. *Beechworth.*
- 4 Sapphire, rough. *Beechworth.*
- 5 Crystal of quartz. *Wood's Point.*

Exhibited by Mr. Edwards, Collins-street, Melbourne.

- 1 Rose water dish and jug, richly embossed with roses and flowers, tendrils and vine leaves.
- 2 Prize Challenge Cup, given by the Volunteers in the Government Printing Office as a prize.
- 3 A superb claret jug, with a vine leaf wreath embossed round the body of frosted silver. The whole of the silver produced at St. Arnaud's mine.
- 4 A burnished silver chalice, Gothic pattern, mounted with malachite and other stones.
- 5 An elegant silver inkstand, Grecian pattern, engraved and chased. Purely Greek ornamentation.
- 6 Emu eggs, mounted in silver as vase, richly embossed and pierced.
- 7 Emu egg, mounted in silver as Grecian vase.
- 8 Emu egg, mounted in silver as a jewel-case, reposing on tree ferns, with native Australians and dog at the base: delicate ornament round the body, leaves, bunches of grapes, and parrots. On the top of the case are emus, in native fern, on which are placed a monkey, owl, and hawk.
- 9 A large cut glass claret jug, mounted in silver, with wreath of vine leaves, grapes, and tendrils, frosted and burnished; also burnished lid and medallions.
- 10 Cup formed of emu egg, mounted in silver, ornamental border, pedestal of vine stalk, with vine leaves and tendrils on a rocky base.
- 11 Cup formed of an emu egg, plain burnished base and pedestal, frosted moulding round the edge.

The whole of the above articles are manufactured of silver from "St. Arnaud's Silver Mine," Ballarat district.

*Exhibited by Messrs. Walsh, Jewellers and Silversmiths,
Collins-street, Melbourne.*

- 1 A silver gilt racing cup, embossed and chased, surmounted with model of racer and jockey, frosted silver.
- 2 A silver gilt tankard, wreath of silver around, cluster of leaves for summit.
- 3 A silver gilt vase, frosted silver wreaths of vine leaves around body, neck, and handle, with pendants of bunches of grapes.
- 4 A silver gilt claret jug, frosted handle, wreaths of vine leaves, tendrils, and bunches of grapes pendant.
- 5 A handsome silver gilt mug, with cover (matted and moulded).

- 6 An engraved glass water caraffe, silver gilt, handle and neck.
- 7 Two silver gilt cups, egg shaped, arabesque work.
- 8 Two silver gilt cups, arabesque work, large size.
- 9 Two silver gilt cups, quite plain, silver gilt, frosted silver pillars and bases.
- 10 Four silver gilt mugs, arabesque work.
- 11 Two silver gilt mugs, engraved and embossed.
- 12 Large mug, silver gilt, large arabesque pattern.
- 13 A silver gilt bason and spoon, engraved, &c.
- 14 A large waiter, silver gilt, engraved with a bold ornamental border, frosted.
- 15 A waiter, silver gilt, smaller, of same pattern.
- 16 A silver gilt waiter, handsomely engraved, chased and beaded edge.

Exhibited by Mr. Evett, Gold Beater.

- 1 Specimens of gold leaf, and the method of beating gold into leaf gold ; its various stages, together with the tools used in the trade.

Exhibited by Mr. Ford, Elizabeth-street.

- 1 Fine large specimen of crystalized gold.
- 2 A fine specimen of crystalized gold, triangular shape.
- 3 Silver (chloro-bromide) in matrix. *St. Arnaud, Ballarat.*
- 4 Crystals of boron.